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EXAMINER

DINH, KHANH Q

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/870,159	<b>Applicant(s)</b> SE CER, SEMIH	
	<b>Examiner</b> Khanh Dinh	<b>Art Unit</b> 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This is in response to the Amendments/Arguments filed on 9/6/2005. Claims 1-57 are presented for examination.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-19, 21-39 and 41-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Goldszmidt et al., US pat. No.6,195,680 (hereafter Goldszmidt).

As to claims 1 and 44, Goldszmidt discloses a method of recovering management of one or more network elements, said method comprising:

monitoring operation of a plurality of distributed gateways (servers 1.2, 1.3 of fig.1a could be gateways, see col.4 lines 27-58), each of said gateways responsible for managing one or more network elements (Client 1.8 of fig.1a could be multiple clients, see col.9 line 47 to col.10 line 48) (see figs.1a, 5, abstract, col.5 lines 22-64).

detecting failure of one of said distributed gateways (detecting a failure in the stream or stream servers 1.2 fig.1b), receiving a notice (the primary ID or the secondary ID) of the detected failure at a central management system (control server 1.1 fig.1a)

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[when the client detects a failure in the stream of the primary streaming server, the client passes the primary ID or the secondary ID to the control server (1.1 of fig.1a)];  
and

responsive to said receiving step, recovering, by the central management system, management of said one or more network elements for which said failed gateway had management responsibility by assigning management responsibility to at least one other of said plurality of distributed gateways (switching the client agent to an alternate streaming server, see fig.1b, col.7 line 11 to col.12 line 33).

As to claims 2 and 3, Goldszmidt discloses translating a communication protocol utilized by said one or more network elements and said plurality of distributed gateways are communicatively coupled to a processor-based management system (using the changed start up protocol of the TCP-router node so that recovery of the primary router will not cause a failure in a backup that has taken over for it, see fig.1a, , col.6 lines 8-60).

As to claims 4-6, Goldszmidt discloses said management system controlling said recovering step, said one or more gateway monitoring systems performing said detecting step and polling said plurality of distributed gateways (detecting failure in streaming servers acting as gateways to clients, see fig.1a, 1b, col.7 line 11 to col.8 line 34 and col.9 lines 6-47).

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As to claims 7-9, Goldszmidt discloses said one or more gateway monitoring systems controlling said recovering step, determining management activities for which a detected failed gateway is responsible for performing and determining one or more available gateways from said plurality of distributed gateways, which are available for assuming at least a portion of said management activities of said detected failed gateway (detecting failure in streaming servers acting as gateways to clients, see fig.1a, 1b, col.7 line 11 to col.8 line 34 and col.9 lines 6-47).

As to claims 10-12, Goldszmidt discloses that one or more available gateways are a subset (clusters of fig.1a) of said plurality of distributed gateways, available gateways are gateways local to said detected failed gateway (detecting a failure server) and grouping two or more of said plurality of distributed gateways (see fig.1a, 1b, col.7 line 11 to col.8 line 34 and col.9 lines 6-47).

As to claims 13 and 14, Goldszmidt discloses determining gateways that are included in a common grouping with said detected failed gateway and said grouping is predetermined based at least in part on a criteria selected from the group consisting of: gateway communication protocol, gateway location, and any user defined criteria (see fig.1a, 1b, col.7 line 11 to col.8 line 34 and col.9 line 48 to col.10 line 63).

As to claims 15-17, Goldszmidt discloses distributing said management activities of said detected failed gateway to at least one of said one or more available gateways,

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determining operational load of said available gateways (utilization rate) and performing load balancing in distributing said management activities to said at least one of said one or more available gateways and load balancing is performed autonomously by a processor-based system (detecting failure of a streaming server and switching the client agent to an alternate streaming server, see fig.1b, col.7 line 11 to col.12 line 33).

As to claims 18 and 19, Goldszmidt discloses determining the operational load for each of said management activities, allocating said management activities to one or more of said available gateways in a manner that approximately balances each of their operational loads and said operational load of said available gateways is determined dynamically, and allocation of said management activities is determined based at least in part on said determined operational load of said available gateways (detecting failure of a streaming server and switching the client agent to an alternate streaming server, see fig.1b, col.7 line 11 to col.12 line 33).

Claims 21-23 are rejected for the same reason set forth in claims 15, 17 and 16 respectively.

As to claims 24 and 25, Goldszmidt discloses translating a plurality of different communication protocols, user predefining at least one of said plurality of distributed gateways to be used in recovering management of one or more network elements for which a particular one of said plurality of distributed gateways has management

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responsibility in the event of a failure of said particular one of said plurality of distributed gateways (detecting failure of a streaming server and switching the client agent to an alternate streaming server, see fig.1b, col.7 line 11 to col.12 line 33).

As to claim 26, Goldszmidt discloses that user predefining criteria to be used in recovering management of one or more network elements in the event of a failure of one of said plurality of distributed gateways (detecting failure of a streaming server and switching the client agent to an alternate streaming server, see fig.1b, col.7 line 11 to col.12 line 33).

As to claim 27, Goldszmidt discloses a system comprising:

plurality of network elements (clients 1.8 fig.1a could be multiple clients, see col.9 line 47 to col.10 line 48) and plurality of distributed gateways (servers 1.2, 1.3 of fig.1a could be gateways, see col.4 lines 27-58) each communicatively coupled to one or more of said plurality of network elements, wherein each of said plurality of distributed gateways is responsible for managing one or more of said plurality of network elements (see figs. 1a, 5, col.5 lines 22-64);

gateway monitoring system (1.1 fig.1a) communicatively coupled to said plurality of distributed gateways (1.2, 1.3 fig.1a), wherein said gateway monitoring system (1.1 fig.1a) is operable to detect failure of at least one of said distributed gateways and management recovery system communicatively coupled to said plurality of distributed gateways [detecting a failure in the stream or stream server 1.2 fig.1b and further

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discloses a dispatcher subsystem (642 fig.6) for assigning primary and secondary reflectors to a client based on their desired source], wherein said management recovery system is operable to autonomously recover management of said one or more network elements for which a detected failed gateway had management responsibility (detecting failure of a streaming server and switching the client agent to an alternate streaming server, see figs.1b, 6, col.7 line 11 to col.12 line 33, col.9 lines 7-47, col.14 line 61 to col.15 line 42).

As to claim 28, Goldszmidt discloses said management recovery system is operable to assign management responsibility of said one or more network elements for which said detected failed gateway had management responsibility to at least one other of said plurality of distributed gateways (detecting failure of a streaming server and switching the client agent to an alternate streaming server, see fig.1b, col.7 line 11 to col.12 line 33 and col.9 lines 7-47).

As to claims 29-31, Goldszmidt discloses translation of a communication protocol utilized by said one or more network elements, said gateway monitoring system and said management recovery system are integrated on a common platform and operable to poll said plurality of distributed gateways (detecting failure in streaming servers acting as gateways to clients, see fig.1a, 1b, col.7 line 11 to col.8 line 34 and col.9 lines 6-47).

Claims 32-35 are rejected for the same reason set forth in claims 8-11 respectively.



As to claim 36, Goldszmidt discloses translating a common communication protocol as said detected failed gateway (see col.6 lines 32-60 and col.7 lines 22-52).

Claims 37-39 are rejected for the same reason set forth in claims 15, 16 and 19 respectively.

As to claim 41, Goldszmidt discloses said management recovery system to present a user interface for alerting a user of said detected failed gateway (see fig.1b, col.7 line 11 to col.8 line 34 and col.9 lines 6-47).

Claims 42 and 43 are rejected for the same reason set forth in claims 25 and 26 respectively.

Claims 45-53 are rejected for the same reason set forth in claims 25, 17, 2, 6, 11 and 8-11 respectively.

As to claim 54, Goldszmidt discloses translation of a communication protocol utilized by said one or more network elements (see col.6 lines 32-60 and col.7 lines 22-52).

Claims 55-57 are rejected for the same reason set forth in claims 19, 16 and 18 respectively.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldszmidt in view of Wolf et al., US pat. No.6,374,297.

Goldszmidt's teachings still applied as in item 3 above. Goldszmidt does not specifically disclose load balancing is performed according to a greedy algorithm. However, Wolf discloses load balancing is performed according to a greedy algorithm (using a logical assignment of overlapping clusters is updated periodically via a greedy algorithm, see col.9 lines 25-62 and col.17 lines 35-52). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to implement Wolf's algorithm into the computer system of Goldszmidt to balance the load between servers because it would have optimized the topology of the underlying assignment graph in order to react to changing customer activity rates at the various web sites and minimized a maximum diameter of said underlying assignment graph and therefore balanced the load between servers in a communications network.

***Response to Arguments***

6. Applicant's arguments filed on 9/6/2005 have been fully considered but they are not persuasive.

\* Applicant asserts that the cited references do not disclose the *amended claims'* limitations "monitoring the operation of a plurality of gateways, when one of the gateways fails, recovering management of the network managements by a central management system".

*Examiner respectfully disagrees. Examiner point out that the Goldszmidt reference still discloses the step of monitoring operation of a plurality of distributed gateways (servers 1.2, 1.3 of fig.1a could be gateways, see col.4 lines 27-58), each of said gateways responsible for managing one or more network elements (Client 1.8 of fig.1a could be multiple clients, see col.9 line 47 to col.10 line 48) (see figs.1a, 5, abstract, col.5 lines 22-64) and detecting failure of one of said distributed gateways (detecting a failure in the stream or stream servers 1.2 fig.1b), receiving a notice (the primary ID or the secondary ID) of the detected failure at a central management system (control server 1.1 fig.1a) [when the client detects a failure in the stream of the primary streaming server, the client passes the primary ID or the secondary ID to the control server (1.1 of fig.1a)] as rejected above.*

\* Applicant further asserts that the cited references do not disclose a gateway monitoring system and a management recovery system.

*Examiner respectfully point outs that Goldszmidt discloses the Applicant claimed invention. Specifically, Goldszmidt discloses a gateway monitoring system (1.1 fig.1a) communicatively coupled to said plurality of distributed gateways (1.2, 1.3 fig.1a), wherein said gateway monitoring system (1.1 fig.1a) is operable to detect failure of at least one of said distributed gateways and management recovery system [dispatcher subsystem (642 fig.6)] communicatively coupled to said plurality of distributed gateways [detecting a failure in the stream or stream servers 1.2 fig.1b and further discloses a dispatcher subsystem (642 fig.6) for assigning primary and secondary reflectors to a client based on their desired source and load characteristics]. Goldszmidt further discloses the management recovery system is operable to autonomously recover management of said one or more network elements for which a detected failed gateway had management responsibility (detecting failure of a streaming server and switching/assigning the client agent to an alternate streaming server, see figs.1b, 6, col.7 line 11 to col.12 line 33, col.9 lines 7-47, col.14 line 61 to col.15 line 42) as rejected above.*

*\* Applicant asserts that the combination of cited references do not disclose a greedy algorithm.*

*The combination of cited references discloses a greedy algorithm as Applicant's claimed invention. For example, Goldszmidt does not specifically disclose load balancing is performed according to a greedy algorithm. However, Wolf discloses load balancing is performed according to a greedy algorithm (using a*

*logical assignment of overlapping clusters is updated periodically via a greedy algorithm, see col.9 lines 25-62 and col.17 lines 35-52). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to implement Wolf's algorithm into the computer system of Goldszmidt to balance the load between servers because it would have optimized the topology of the underlying assignment graph in order to react to changing customer activity rates at the various web sites and minimized a maximum diameter of said underlying assignment graph and therefore balanced the load between servers in a communications network.*

\* Applicant asserts that there is no motivation or suggestion to combine the references.

*In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have optimized the topology of the underlying assignment graph in order to react to changing customer activity rates at the various web sites and minimized a maximum diameter of*

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*said underlying assignment graph and therefore balanced the load between servers in a communications network.*

*Therefore, the examiner asserts that cited prior art teaches or suggests the subject matter broadly recited in independent claims 1, 27 and 44. Claims 1-26, 28-43 and 45-57 are also rejected at least by virtue of their dependency on independent claims and by other reasons set forth in the previous office action [mailed on 6/3/2005]. Accordingly, claims 1-57 are respectfully rejected.*

### **Conclusion**

7. Claims 1-57 are rejected.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (571) 272-3936. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on (571) 272-3939. The fax phone number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Khanh Dinh  
Primary Examiner  
Art Unit 2151  
11/22/2005